

Proposed Project

Upper Little Patuxent Watershed

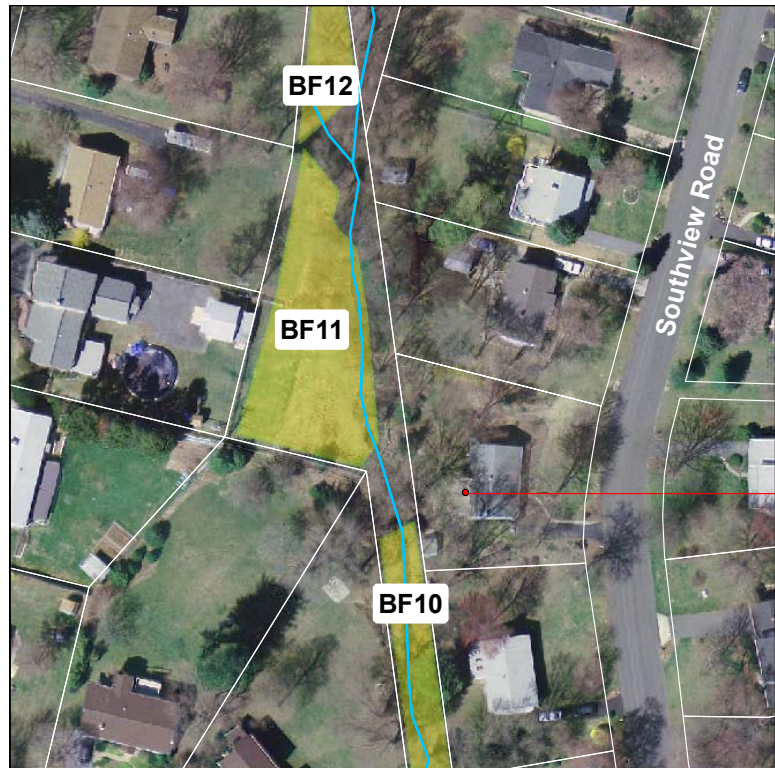
Project Number: BF11

Subwatershed: Plumtree Branch 2

Project Type: Riparian Buffer
Replacement

Project Size: Approx. 140 feet in length /
0.26 acres

Project Location: Behind houses between
Greenway Drive and Southview Road.



Project Description: As shown in the above photo, field crews identified an area of missing or reduced buffer along approximately 600 feet of stream behind the homes along Southview Road and Greenway Drive. This project would entail planting of native trees and shrubs along approximately 140 feet of stream to widen the existing buffer. This project could be combined with project BF12, although the available area for planting is greatly reduced to the north of BF11. Homeowner education would be necessary to ensure that trees and grasses are allowed to grow naturally.

Use of volunteer assistance for site preparation, planting and necessary maintenance and monitoring of the site could help reduce overall project cost.

Project Benefits:

Stabilization	Additional trees and shrubs will help stabilize the stream bank.
Habitat	Additional habitat provided by this project would be limited due to the proximity of houses.
Water Quality	A more established buffer will provide shading effects to reduce water temperature and will trap runoff and pollutants such as fertilizers from the adjacent property.

Project Constraints:

Environmental	No environmental/permitting constraints are present.
Property Ownership	This property lies on County owned property (Brinkleigh natural resources open space).
Facility Access	The best access is from a utility easement between Southview Road and the open space located just south of project BF11.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development.

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Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	0.26	AC	\$3,750.00	\$975	\$975
Plant Material (shrubs)	0.26	AC	\$2,725.00	\$709	\$709
Mulch, Tree Shelter	177	PLANTS	\$6.00	\$1,062	\$1,062
Cost to Plant	177	PLANTS	\$6.00	\$0	\$1,062
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$2,745	\$3,807
Base Construction Cost				\$2,745	\$3,807
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$2,745	\$3,807
Contingency (30%)				\$824	\$1,142
Construction Subtotal				\$3,569	\$4,949
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$3,569	\$4,949
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$137	\$190
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$594	\$824
Life Cycle Cost				\$4,200	\$5,800

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Planting density is planned at 1 tree or shrub planted at 8 foot intervals for a total of 681 plants per acre.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.